

# THE PHYSICS COLLOQUIUM

Thursday 23 March 2023, 4:00 p.m.  
Nijenborgh 4, Lecture Hall 5115.0317 (Schröderzaal)

## Ultra-high-energy cosmic rays

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The universe hosts an omnipresent, but rare, population of subatomic particles with astonishingly high kinetic energy, the so-called ultra-high-energy cosmic rays.

While these particles zip through space, the trajectory of a few intercepts the Earth, where they collide in the atmosphere.

The initial collision triggers a chain-reaction, resulting in a cascade of subatomic particles that rush through the atmosphere.

The Pierre Auger Observatory instrumented 3000 km<sup>2</sup> to catch these very rare particles and I will present its main findings.

*Join us for coffee starting 3:30 p.m. Refreshments will be served after the lecture.*

*For more information contact the host: Manuela Vecchi ([m.vecchi@rug.nl](mailto:m.vecchi@rug.nl))*

*Website: <http://www.rug.nl/research/vsi/colloquia/>*